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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,725	06/01/2001	Frederic Dufaux	15311-2305	4232
22879	7590	10/20/2005		
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			EXAMINER SAFAIPOUR, HOUSHANG	
			ART UNIT	PAPER NUMBER
			2627	

DATE MAILED: 10/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/872,725

Applicant(s)

DUFAUX ET AL.

Examiner

Houshang Safaipoor

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5, 7-14 and 25-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25-36 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5 is/are rejected.
- 7) ☒ Claim(s) 7-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's amendment filed on September 13, 2005 has been entered and made of record.

The indicated allowability of claim 6 is withdrawn in view of the newly discovered reference(s) to Iwata. Rejections based on the newly cited reference(s) follow. It should be noted here that the examiner maintains his previous rejection because the Printed Publication by Irani (cited before), also addresses minimization of sum of squared difference as a match measure for aligning two images (page 607, paragraph 3.1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Altunbasak et al. (U.S. Patent No. 6,597,816) and further in view of Printed Publication (Mosaic Based Representations of Video Sequences and Their Applications) by Irani et al. (IEEE 0-8186-7042-8/95). This publication is cited by the applicant.

Regarding claim 1, Altunbasak et al. discloses a method for generating an electronic version of a document, the method comprising the steps of: receiving a plurality of digital, electronic images of the document; generating a corrected image from each received image;

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deriving one or more motion parameters for each pair of consecutive, corrected images, the motion parameters indicating the relative motion between the consecutive, corrected images; aligning each image relative to the previous images based on the derived motion parameters; and blending each image into the previous images so as to produce the electronic version of the document (col. 1 line 59 through col. 2, line 50). Altunbasak does not explicitly disclose derivation of the motion parameters by minimizing the sum of squares differences between each pair of consecutive images. Irani et al. discloses such a method as indicated on page 607, right hand column, paragraphs 3 and 4 under section 3.1 (Image Alignment). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Irani's method in Altunbasak's invention for proper alignment of the images.

Regarding claim 2, Altunbasak et al. discloses the method of claim 1 wherein the digital, electronic images are produced by a digital video camera (col. 2, lines 46-50).

Regarding claim 3, Altunbasak et al. discloses the method of claim 1 wherein two or more series of digital, electronic images of the document are received, whereby each series of images corresponds to a respective sweep of the document by the video camera, the method further comprising the steps of: merging the images from each series together to form a composite, mosaic image of the respective sweeps, and merging consecutive mosaic sweep images together to form the electronic version of the document (col. 1 line 59 through col. 2, line 50).

Claims 1-3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al. (U.S. Patent No. 6,173,087) and further in view of Printed Publication (Mosaic Based

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Representations of Video Sequences and Their Applications) by Irani et al. (IEEE 0-8186-7042-8/95).

Regarding claim 1, Kumar et al. discloses a method for generating an electronic version of a document, the method comprising the steps of: receiving a plurality of digital, electronic images of the document; generating a corrected image from each received image; deriving one or more motion parameters for each pair of consecutive, corrected images, the motion parameters indicating the relative motion between the consecutive, corrected images; aligning each image relative to the previous images based on the derived motion parameters; and blending each image into the previous images so as to produce the electronic version of the document (col. 1, lines 21-52 and col. 11, line 19-56). Kumar et al. does not explicitly disclose derivation of the motion parameters by minimizing the sum of squares differences between each pair of consecutive images. Irani et al. discloses such a method as indicated on page 607, right hand column, paragraphs 3 and 4 under section 3.1 (Image Alignment). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Irani's method in Kumar's invention for proper alignment of the images.

Regarding claim 2, Kumar et al. discloses the method of claim 1 wherein the digital, electronic images are produced by a digital video camera (col. 11, lines 51-56).

Regarding claim 3, Kumar et al. discloses the method of claim 1 wherein two or more series of digital, electronic images of the document are received, whereby each series of images corresponds to a respective sweep of the document by the video camera, the method further comprising the steps of: merging the images from each series together to form a composite,

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mosaic image of the respective sweeps, and merging consecutive mosaic sweep images together to form the electronic version of the document (col. 1, lines 21-52 and col. 11, line 19-56).

Regarding claim 5, Kumar et al. discloses the method of claim 4 wherein in the corrected image frames include a plurality of pixels, and the sum of squares differences is applied on a pixel-by-pixel basis (col. 4, line 64 through col. 5 line 30).

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Altunbasak et al. (U.S. Patent No. 6,597,816) and further in view Iwata (U.S. Patent No. 5,604,546).

Regarding claim 1, Altunbasak et al. discloses a method for generating an electronic version of a document, the method comprising the steps of: receiving a plurality of digital, electronic images of the document; generating a corrected image from each received image; deriving one or more motion parameters for each pair of consecutive, corrected images, the motion parameters indicating the relative motion between the consecutive, corrected images; aligning each image relative to the previous images based on the derived motion parameters; and blending each image into the previous images so as to produce the electronic version of the document (col. 1 line 59 through col. 2, line 50). Altunbasak does not explicitly disclose derivation of the motion parameters by minimizing the sum of squares differences between each pair of consecutive images. Iwata (without showing the actual equation) discloses such a method as indicated on col. 16, lines 1-25). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Iwata's method in Altunbasak's invention for proper alignment of the images.

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Allowable Subject Matter

Claim 25 is allowed. Claims 26-36 are, directly or indirectly, dependent on claim 25 and, therefore, are allowed.

Claims 7-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Houshang Safaipour whose telephone number is (571)272-7412. The examiner can normally be reached on Mon.-Thurs. from 6:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles, Sr. can be reached on (571)272-7402. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Houshang Safaipour
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